

# Review of: "Impact of KRAS mutation status on the efficacy of immunotherapy in lung cancer brain metastases"

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**Potential competing interests:** The author(s) declared that no potential competing interests exist.

This retrospective, single-center study included NSCLC patients with brain metastasis over a period of 10 years

Many elements make this study difficult to interpret and the results present large uncertainties.

1. The retrospective mono-centric character
2. The inclusion period, which is very long with a significant change in management of cerebral metastases but also systemic treatments
3. A mixture, if I understood correctly, of patients with a diagnosis of BM de novo and others with a diagnosis of BM during the disease, making it difficult to interpret the median of OS
4. An exclusion of patients so the BM was operated with insufficient justification
5. The analysis on KRAS patients is based on samples that are too small and it does not seem to me that definite conclusions can be drawn. Why in these patients we compare the survival rate at one year? And not the medians of OS. The sentence "When comparing all patients who received ICI , there was no difference in OS from BM between patients with vs without KRAS mutations." Seems to contradict the previous sentence
6. Discussion: the authors stated that " In agreement with the clinical trials, we observed an improvement in OS when patients were treated with ICIs within 90 days of the diagnosis of brain metastases... but there is not clinical trial dedicated to patients with BM ....
7. .Discussion: the authors stated "When we compared our ICI-90 cohort to our no-ICI cohort we found a large difference in the proportion who underwent resection of a BM (29.4% vs 5.7%,  $p < 0.001$ ) and therefore we excluded these patients from the remaining analysis... .It's not correct to do it... these patients should remains in the analysis